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Number 35.

March, 1917.

W. R. WALTON SUCCEEDS THE LATE PROF. F. M. WEBSTER.

Mr. W. R. Walton, after having served for more than a year as "Acting in Charge Cereal and Forage Insect Investigations," has been placed "In Charge" of these investigations. Mr. Walton, as is well known to members of the Bureau force, was closely associated with Prof. F. M. Webster in his executive administration of this section of the Bureau for two years before the latter's lamented death, and thus gained the experience and the personal knowledge of the executive work and the investigators connected with the section necessary to enable him to carry on the office with the least waste of energy. His standing as an entomologist and his broad training in the Bureau have well fitted him to take up this work. [L. O. H.]

ALL TELEGRAMS TO BE STAMPED.

Field employees are requested to either stamp or write the words "Official Business - Bureau of Entomology" on all official telegrams. This will facilitate the work in distributing telegrams to the different Bureaus when they are received for payment at the central accounting office of the Department.

PENALTY ENVELOPES AND LABELS.

Attention is called to paragraph 104 of Secretary's Memorandum No. 143 (Amendment No. 1 to Administrative Regulations) dated July 1, 1915, which states:

"Penalty envelopes or penalty labels must not be furnished merchants or others from whom articles are purchased for the delivery of such articles by transmission through the mails."

The use of penalty labels for this purpose is in violation of the postal regulations.

AUGUST BUSCK GOES TO MEXICO.

Arrangements have been made through the Department of State for a trip into northern Mexico by August Busck. He will spend some weeks studying the extent of the infestation by the pink bollworm, and the feasibility of eradication. He will visit Monterey, San Pedro, and Torreon, in the vicinity of which places Egyptian cotton has been planted.

"THE HYMENOPTERA OF CONNECTICUT."

A publication of more than ordinary interest to entomological workers has appeared in the *Hymenoptera* or wasp-like insects of Connecticut, by Henry Lorenz Viereck, Assistant Biologist, U. S. Biological Survey, with the collaboration of Dr. A. D. MacGillivray, Ph. D., University of Illinois; C. T. Brues, M. S., Harvard University; W. M. Wheeler, Ph. D., Harvard University; and S. A. Rohwer, U. S. Bureau of Entomology.

The volume is published as Part III, Guide to the Insects of Connecticut, State Geological and Natural History Survey Bulletin No. 22. It consists of 824 pages including 10 plates and several text figures illustrating the taxonomy as

applied to the various superfamilies. Keys to the genera and species are provided and numerous new species are described therein.

The volume may be obtained by application to George Godard, State Librarian, Hartford, Connecticut; the price is \$2.25.

Dr. G. C. Crampton, assistant professor of entomology, at the Massachusetts Agricultural College, was in the city, from the 22d to the 25th, consulting with specialists in insect morphology at the U. S. National Museum.

**WANTED: INSECTS SUPPOSED TO BE ATTACKED BY BACTERIAL OR
OTHER DISEASES.**

Dr. G. F. White, recently assigned to the study of insect diseases with the branch of Cereal and Forage Insect Investigations, will be glad to receive specimens of insects, especially larvae, supposed to be attacked by bacterial or other diseases. Material should be addressed to Dr. G. F. White, Cereal & Forage Insect Investigations, Bureau of Entomology, U. S. Department of Agriculture.

AMERICAN WORKERS IN HEMIPTERA.

There was issued during March an informal pamphlet entitled "List of American Workers in Hemiptera; their Projects and Bibliographies. 1. Heteroptera." The object of the pamphlet was an attempt to summarize the present status of work upon Heteroptera in the United States, which includes name and address of workers, their position or institution affiliated with, character of work, problems engaged in or expecting to undertake, and bibliography. Data blanks were sent to all persons known to be especially interested in Heteroptera, but it is only natural that all workers or students could not be reached. However, besides the purely economic workers, 26 men returned the blanks filled in and hence are listed in the pamphlet. **A second such pamphlet dealing with Homoptera is in course of preparation.** Any one desiring a copy of either should request same by writing to the compiler, Mr. Edmund H. Gibson. [Division of Insects, U. S. Nat. Mus.]

THE MANUAL OF SILK CULTURE.

Announcement is made of the issuance of "The Manual of Silk Culture", by T. A. Keleher, of the Bureau of Entomology. This manual is devoted largely to an exposition of the care and rearing of silkworms and is set forth in a style which will appeal to the elementary classroom and amateur sericulturist, although preserving all the data which would render it invaluable to anyone engaged in the business of rearing silkworms, for the eggs, cocoons or silk fibre.

The author, during the years in which the Department of Agriculture conducted silkworm investigations, was engaged in the work and since the discontinuance of the Government experiments, has continued the study of rearing silkworms for commercial and educational purposes.

W A N T E D :

(Sendings of the following material, as indicated, will be greatly ap-

preciated, and due credit will be given, especially in such cases wherein notes are submitted.)

MATERIAL DESIRED:

ADDRESS:

Chalcidid parasites and notes on same:	E. J. Newcomer, Portland, Ore.
Eggs of Hemiptera: Notes on same:	
Records of predaceous Hemiptera:.....	E. H. Gibson, U. S. National Museum.
Oestridae:.....	Dr. C. H. T. Townsend, U.S.Nat. Museum.
Insects infected with bacterial disease....	Dr. G. F. White, Bureau of Entomology.
Insects infected with fungous disease:	
Scale insects especially infected with fungous disease.....	Dr. A. T. Speare, Bureau of Entomology.
Live specimens: Cowpea weevil [<i>Bruchus (Pachynerus) chinensis</i>]: Pink corn-worm (<i>Batrachedra rileyi</i>).....	Dr. F. H. Chittenden, Bureau of Entomology.
Larvae and notes on LeConte's sawfly (<i>Diprion lecontei</i>) or any species of <i>Diprion</i>	S. A. Rohwer, East Falls Church, Va.
Cutworms, live; for taxonomic studies.....	E. C. Crumb, Clarksville, Tenn.
Fleas.....	F. C. Bishopp, Dallas, Texas.
News clippings relating to entomology.....	Dr. L. O. Howard, Bur. Entomology.
News clippings (especially) relating to "insects as food for man".....	Dr. L. O. Howard, Bur. Entomology.

RECENT PUBLICATIONS OF THE BUREAU OF ENTOMOLOGY.

JOURNAL OF AGRICULTURAL RESEARCH: Spore-forming bacteria of the apiary.
Dr. Arthur H. McCray. March 12, 1917. K-51

DEPARTMENT BULLETIN: No. 429. Life history of the codling moth in the Pecos Valley of New Mexico. Dr. A. L. Quaintance & E. W. Geyer. February 28, 1917.

No. 513. Fumigation of ornamental greenhouse plants with hydrocyanic-acid gas. E. R. Sasscer & A. D. Borden. March 10, 1917.

SEPARATE FROM YEARBOOK FOR 1916.

The practical use of insect enemies of injurious insects. L. O. Howard. March 1917.

LIBRARY

Miss Mabel Colcord, Librarian.

NEW BOOKS.

Argentine Republic- Ministerio de agricultura- Comision nacional para propagar la Prospaltella berlesei How. Destrucion de la Diaspis por la Prospaltella 1916; 3. resumen. Buenos Aires, 1916. 39p., col. pl., map.

Ealand, C. A. Insect enemies. London, 1916. 223p. illus.

Georgia State College of Agriculture. Bulletins.

v. 5, no. 6 [whole no. 115] Dec. 1916. Cotton production under boll weevil conditions. L. E. Rast.

v. 5, no. 8 [whole no. 117] Jan. 1917. Reorganization of farms in boll weevil territory. J. R. Fain and S. H. Starr.

King, W. V. The effect of cold upon malaria parasites in the mosquito host. (Jour. Exp. Med. v. 25, no. 3, p. 495-498, pl. 38. March 1, 1917.)

La lutte contre les sauterelles dans les divers pays. Rome, 1916. 16, 186p. (At head of title: Institute International d'Agriculture. Bureau des renseignements agricoles et des maladies des plantes)

Mitzmain, M. B. Is mosquito or man the winter carrier of malaria organisms? Washington, D. C., Dec. 1916. 32p., 19 fig. (U. S. Public Health Service. Public Health Bulletin 84)

Sollmann, Torald. Manual of pharmacology and its applications to therapeutics and toxicology. Philadelphia and London, 1917. 901p.

Viereck, H. L. Guide to the insects of Connecticut. Prepared under the direction of W. E. Britton. Part III. The Hymenoptera or wasp-like insects, of Connecticut... Hartford, 1916. 824p., 10 pl. (Connecticut geological and natural history survey bul. 22)

Weiss, H. B. Nursery inspection: The importance of legislation against crop pests. Trenton, N. J., 1916. 51-64p. (New Jersey Dept. Agr. Bul. 2, Dec. 191 6)

BEE CULTURE.

E. F. Phillips, In Charge.

George H. Rea was absent from his work in North Carolina during most of February on account of the death of his wife and also on account of ill health.

Kennith Hawkins spent the month in Texas, Oklahoma and Arkansas. A series of beekeepers' meetings has been arranged by the State Entomologist of Texas, which will begin March 26. Mr. Hawkins will attend these. At the close of this work he will return for work in Virginia.

E. F. Phillips attended the meeting of the Pennsylvania State Beekeepers' Association at Harrisburg, on March 2nd and 3d. He also went to Knoxville, Tenn., on March 15 to consult with C. E. Bartholomew and the Extension Director concerning the summer extension work in Tennessee.

George S. Demuth left on March 8 for a trip through Montana, Idaho, Washington and Oregon for the purpose of studying the beekeeping possibilities of these States and of consulting with State inspectors and entomologists in these states concerning their work. He will return about April 20.

E. G. Carr, apiary inspector of New Jersey, has been appointed Collaborator. He will make a survey of beekeeping in that State in conjunction with the office of the State Entomologist.

DECIDUOUS FRUIT INSECT INVESTIGATIONS.

A. L. Quaintance, In Charge.

John B. Gill, who has been spending a few weeks in Washington preparing manuscripts on pecan insects for publication, has returned to his field headquarters, Monticello, Fla., to resume his field duties.

H. K. Plank has returned to his field headquarters at Grand Junction, Colo., where he will now be in charge of the Bureau work in the control of the codling moth in the Grand Valley.

The laboratory at Wenatchee, Wash., has been discontinued and E. J. Newcomer, in charge of stigmonose investigations, has been transferred to Portland, Oregon, which place is now his permanent headquarters.

FEDERAL HORTICULTURE BOARD.

C. L. Marlatt, In Charge.

The quarantine against Indian corn or maize, and certain closely related plants from the Orient, has been modified, effective April 1, 1917, to allow maize from Japan and Manchuria to come in under permit, on condition that it is sterilized at the port of arrival under supervision of an inspector of the Department of Agriculture. Practically all such corn will enter through the port of Seattle. Mr. Alan G. Webb, who has for the past year and a half been stationed at Boston, engaged in the inspection of imported potatoes and assisting in the supervision of the disinfection of imported cotton, has been transferred to Seattle to supervise the sterilization of imported corn. Mr. Webb will also take care of the inspection service in relation to cotton, potatoes, and other plant products at Seattle and nearby ports.

Provision has been made to repeat the vacuum fumigation tests with pink bollworm larvae under the direction of Mr. E. R. Sasser, to confirm results obtained in the earlier experiments, and also to determine the effect on these larvae of the residual gas remaining in cotton bales. The living material for these tests was obtained from Hawaii through Mr. C. E. Pemberton.

The pink bollworm inspection and control service is being rapidly organized in Texas under the direction of Dr. W. D. Hunter of the Board, with Mr. T. C. Barber in field charge. To expedite the control and clean-up work of the cotton mills, which received during the year 1916 Mexican cotton seed, the cooperation of the Office of Markets and Rural Organization has been secured to the extent of the detail for this purpose of three expert cotton agents.

In view of the occurrence of the pink bollworm in Mexico, both the cottonseed quarantine and the regulations governing the importation of cotton into the United States have been amended, effective July 1, 1917, providing for a closer supervision of importations of cotton seed, seed cotton, cottonseed hulls, and lint cotton from the Imperial Valley in Lower California, Mexico.

The Mediterranean Fruit Fly and Melon Fly Quarantine, in relation to Hawaii has been revised, effective June 1, 1917, so as to eliminate the long list of prohibited fruits, to which it had become necessary to make substantial additions, so that as now worded it prohibits all fruits except bananas of the noncooking type, pineapples, taro, and cocoanuts in the natural or raw state. Provision is made for the certification for movement to the mainland of fruits and vegetables other than those named when it can be shown to the satisfaction of the Department of Agriculture that such other fruits and vegetables, in the form in which they are to be shipped, are not and can not be a means of conveying either the Mediterranean fruit fly or the melon fly. This change makes this quarantine much more easily understood and simplifies its administration.

Mr. O. A. Pratt, of the Bureau of Plant Industry, has been transferred to the Board and will be stationed at Calexico, California, to see that these restrictions are enforced.

The Botanic Garden in Washington has been brought under the same supervision as to inspection, disinfection, and certification of all plants distributed by it as hitherto obtained in relation to the propagating gardens and plant distributing agencies of the Department of Agriculture. Hereafter, therefore, all of the plant distributing agencies of the Federal Government will be under similar control in cooperation with the Federal Horticultural Board.

FOREST ENTOMOLOGY.

A. D. Hopkins, In Charge.

On March 17 Mr. T. E. Snyder left for an extended trip which will take him to Florida, Louisiana, Texas, New Mexico, Arizona, California, Oregon, Utah, Colorado and Kansas for the purpose of investigating insect damage to Australian pine in Florida, termites, insects affecting mine props, forest products, lead cables, etc. He is expected to be away from Washington about two months.

SOUTHERN FIELD CROP INSECT INVESTIGATIONS

W. D. Hunter, In Charge.

F. L. McDonough has returned to his laboratory at Quincy, Florida, where he will remain for the remainder of the season.

G. D. Smith has changed his laboratory from Thomasville, Ga., to Madison, FL.

W. D. Hunter attended the meeting of the Cotton Belt Entomologists at Gainesville, Fla., on March 29 and 30.

TROPICAL AND SUBTROPICAL FRUIT INSECT INVESTIGATIONS.

C. L. Marlatt, In Charge.

Mr. Pemberton has been given the title of Assistant Entomologist, in recognition of the importance of his work and assignment in charge of the Mediterranean Fruit Fly Station at Honolulu, and of the inspection service maintained under the fruit-fly quarantine.

Mr. Neuls, who has been assisting Mr. Woglum in the Citrus Station at Alhambra, has resigned to go into private work.

The following collaborators have been appointed in West Indies and South American countries for the purpose of aiding the Bureau in collecting information and biological material relating particularly to fruit-infesting flies, but also covering other insects affecting subtropical and tropical plants:

Adolph Hempel, State Entomologist of Sao Paulo, Brazil.

Dr. Carlos E. Porter, Director Institute Agricola de Chile.

F. W. Urich, Government Entomologist of Trinidad.

Archibald H. Ritchie, Government Entomologist in Jamaica.

Patricio Cardin, Government Entomologist of Cuba.

TRUCK CROP AND STORED PRODUCT INSECT INVESTIGATIONS
F. H. Chittenden, In Charge.

F. M. Wadley has been appointed scientific assistant, for work at the Wichita, Kans., station on truck crop and stored product insects, in cooperation with F. B. Milliken.

H. K. Laramore has been appointed scientific assistant, for work in connection with the project "Insects as Carriers of Plant Diseases" and will probably be stationed at Plymouth, Ind.

Arthur J. King has been appointed as field assistant, and will continue work on root-maggets and other pests at Vashon, Wash.

F. A. Johnston, Entomological Assistant, will remain at Hart, Mich., to investigate insects injurious to beans and peas, especially the pea aphid, and the pea and bean weevils; also insects as carriers of plant diseases.

C. H. Popenoe has recently returned from a trip to Philadelphia for the purpose of inaugurating a fumigation of baled furs by the vacuum system. The John B. Stetson Co., has recently installed a plant capable of a capacity of 50-1200 pound bales of fur per day.

NOTES FROM THE WICHITA (KANSAS) FIELD STATION

March 20, 1917.

Normal temperature and rainfall during last October were followed during November by a temperature 2.4°F. above normal and rainfall 1.75 inches above normal. These conditions probably allowed hibernating insects in this region to establish themselves securely for the winter with their development slightly advanced for the season. The excess rainfall apparently was not detrimental to insects in the average types of soil found here.

During December, January and February the average temperature was about 32°F., which was not far from normal. The lowest was -8° February 2. The December rainfall was nearly normal, but for January and February there has been a deficiency of 1.43 inches. Beginning the last week in February there have been several severe "dust storms", with strong westerly winds, prevailing for 12 hours or longer, and drifting much dust and particles of loose earth.

Under the conditions as given, the mortality among hibernating insects has probably been about normal. Some insects on the surface have been covered by drifting soil and those in loose surface soil have been exposed, but unless this process is continued to a much greater extent no unusual mortality will result.

The false chinch bug (*Nysius ericae* Schill.) cannot be found where large

numbers were present during last October and November. But the adjacent fields have been plowed and much fine soil has been lodged in the rubbish under and along the roads.

The melon aphid (*Aphis gossypii* Glov.) has not been found outside of greenhouses since outdoor vegetation was killed last fall.

Living specimens of *Typhoea fumata* L. were found March 8 in straw from wheat threshed in 1916.

[Signed] F. B. Milliken.

NOTES FROM THE BATON ROUGE (LOUISIANA) STATION.

The Colorado potato beetle (*Leptinotarsa decemlineata* Say) has been reported as occurring in potato fields in Louisiana somewhat earlier than usual this year, 1917.

Writing March 14, H. J. David, Parish Demonstration Agent for Lafourche Parish, states:- "The Colorado potato beetle has appeared early on the potato crop of Lafourche; unable to say extent of infestation, but appears to be general".

March 16 this species was also reported at Natchitoches Parish with a statement that about 3 acres of potatoes were involved, the beetles having appeared in large numbers.

[Signed] Thomas H. Jones.

CEREAL AND FORAGE INSECT INVESTIGATIONS W. R. Walton, In Charge.

The men attached to the field service of this branch will be interested in knowing that Doctor G. F. White, who was recently attached to bee culture in the capacity of bacteriologist, has been assigned to the study of insect diseases especially those of bacterial origin and begins his new duties on April first. He will be pleased to receive specimens of insects supposed to be attacked by bacterial or other diseases, especially larvae. Such material should be addressed as usual to this office.

NOTES FROM THE MARTINEZ (CAL) FIELD STATION.

March 1, 1917.

The winter, so far, has been one of unusually low temperature compared with the normal for the Bay region of California, and the rainfall has been considerably below the normal.

The heavy frosts have undoubtedly greatly retarded the normal insect development in this section of the country. The grains have been sprouting in the first fields since the middle of January and early in February the adults of the Hessian fly for the season began to emerge from the old wheat stubble and to deposit their eggs on the young wheat plants. This is the first emergence of the adults of Hessian fly since early in the spring of 1916.

Adults of *Isosoma grande*, form *minutum*, were also first observed in early February as appearing in the fields.

Adults of *Diabrotica soror* have been observed on warm days since the middle of January and a few have probably been present throughout the entire winter in the adult stage.

[Signed] Theodore D. Urbahns.

NOTES FROM THE TEMPE (ARIZONA) FIELD STATION.

March 19, 1917.

Our already unusual winter has continued by giving us five killing frosts during the month of March. This is the first time that we have had a killing frost during the month of March at the Tempe laboratory since it was established in 1911. The average mean temperature for February and March, to date, has been ten degrees lower than the same period last year.

This has caused some interesting insect activities. *Aphis maidis* has been exceptionally numerous upon the barley crop, since it seems to be too cold for development of parasites; while the majority of other insects have been very inactive, and such forms as *Chaetocnema ectypa*, *Languria mozardi* and *Bruchophagus funebris* have not as yet started oviposition when in past seasons, the first generation has usually been well under way by this time. We will await with interest the affect of these unusual conditions upon insect life this coming season.

[Signed] V. L. Hildermuth

